Galois Cohomology

Prof. Dr. Timo Richarz, M. Sc. Can Yaylali

Time and Place

Fridays, 09:50-11:30 via the Online-Meeting tool Zoom.
Starting: Friday, 24.04.2019, 9:50

The course is given in English. In case you are interested in participating, please contact the lecturer via email for further information.

Contents

This is an introductory course to Galois cohomology. Topics include profinite groups (topological groups, inverse/direct limits), homological algebra (abelian categories, injective/projective objects, derived functors), group cohomology (Galois cohomology, forms, Brauer groups), and if time permits local class field theory.

Prerequisites

Group theory, Rings and Modules, Galois theory of fields as covered by the algebra course last term, General topology as covered by an introductory course in topology.

Literature

- J.-P. Serre: Galois Cohomology, Springer.
- J.-P. Serre: Local fields, Springer.
- J. Neukirch, A. Schmidt, K. Wingberg: Cohomology of Number fields, Springer.
- J.Cassels, A. Fröhlich: Algebraic Number Theory, Academic Press Inc., London.

Supplementary:

- Bourbaki: General Topology; Algebra.
- J. de Jong et. al.: The Stacks Project
- Grothendieck: Sur quelques points d'algèbre homologique, Tohoku Math J. (2) 9, 119-221 (1957).

Exam

This is an oral exam. For further information contact the lecturer.